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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/826,225	04/04/2001	Julian Norley	P-1029	2459
7590 07/06/2004			EXAMINER	
Melissa A. Carr Advanced Energy Technology Inc. 12900 Snow Road Parma, OH 44130			VARGOT, MATHIEU D	
			ART UNIT	PAPER NUMBER
			1732	

DATE MAILED: 07/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/826,225

Applicant(s)

NORLEY ET AL.

Examiner

Mathieu D. Vargot

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

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1. In view of the petition filed, the case has been restored to active status.

Applicant's response of February 18, 2004 has been noted concerning the restriction requirement. However, upon reconsideration, the claims have been rejoined and an action now follows on claims 1-29.

2. Claims 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 is indefinite in calling for "the application of pressure to the laminate" when in fact such has not been set forth in claim 2, from which claim 5 depends, or claim 1 from which 2 depends. Applicant needs to add proper antecedent basis for this. Note that claims 1 and 2 do not specify that pressure is applied to the laminate itself, but rather that pressure is applied to the graphene layers of the laminate to directionally align them. There is no order for the steps recited in claim 1 and hence they would have been performed in any order. In claim 6, line 2, it is unclear what applicant means by "greater density"—ie, greater than what?

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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Claims 1, 2, 4, 6, 16-20, 22 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Tzeng (see col. 4, lines 1-9 and 21-37; col. 6, lines 52-54; col. 7, lines 5-14). The applied reference discloses the instant process for producing a graphite article by directionally aligning layers of graphite sheets by roll pressing them and laminating the layers into a unitary article. For reasons already noted in paragraph 2, supra, instant claim 1 is clearly readable on this as no order of steps is given. Indeed, the recitation of claim 3 would indicate that such is so, since claim 3 would fail to further limit claim 1 if it were not so. Tzeng discloses suitable densities for the individual sheets and it is submitted that the laminated product would likewise exhibit such densities. See column 4, lines 24-25. The roll pressing taught in Tzeng is calendering.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 5, 21 and 24-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tzeng.

Tzeng discloses the basic claimed method of making a graphite article as set forth in paragraph 3, supra, the applied reference essentially lacking at best a clear disclosure that pressure is applied after the formation of the laminate to align the graphene layers (ie, claims 3 and 24) and that the application of pressure to the laminate results in an increase in the density of the laminate (claim 5). Concerning the latter, it is rather clear

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that the application of a pressure to a laminate would probably function to increase the density thereof given that such occurs when individual layers are pressed. However, Tzeng never really discloses pressing the laminate, at least with respect to increasing the density or aligning the layers. At any rate, given the disclosure of the pressing increasing the density of individual sheets and directionally aligning same, it certainly would have been obvious that such would also occur when the layers are laminated together. The exact pressure applied would have been within the skill level of the art. Note that Tzeng teaches using a pressure adhesive (col. 7, line 9), which presumably would require some degree of pressure to be applied during the laminating.

5. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

In that the previous rejection has been vacated in view of the newly found reference to Tzeng, applicant's comments directed to the previous combination are now moot.

Applicant's arguments concerning unexpected results are not probative in light of a 102 rejection.


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mathieu D. Vargot whose telephone number is 571 272-1211. The examiner can normally be reached on Mon-Fri from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni, can be reached on 571 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Vargot  
June 28, 2004

  
Mathieu D. Vargot  
Primary Examiner  
Art Unit 1732

6/28/04